COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

A FORMAL REVIEW OF THE CURRENT STATUS OF TRIMBLE COUNTY UNIT NO. 1	))	CASE NO. 9934

O R D E R

IT IS ORDERED that Louisville Gas and Electric Company ("LG&E") shall file an original and 12 copies of the following information with this Commission, with a copy to all parties of record. Include with each response the name of the witness who will be responsible for responding to questions relating to the information provided. Careful attention should be given to copied material to insure that it is legible. The information requested herein is due no later than November 13, 1987. If the information cannot be provided by this date, you should submit a motion for an extension of time stating the reason a delay is necessary and include a date by which it will be furnished. Such motion will be considered by the Commission.

1. On page 6-18 of the Capacity Expansion Study, Lyon Exhibit No. 1, ("Lyon No. 1"), it is assumed that between 1991 and 2006, one-third to two-thirds of the total surplus capacity could be sold; in other words, off-system sales have been assumed. On page 10-1, it is stated the economic analysis used costs which came either directly from the decision tree risk analyses or from modifications to the results of the decision trees to account for

off-system sales or purchases. Explain why modifications to the decision tree analyses were necessary given the assumptions presented at 6-18.

2. In Case No. 9234,[1] a three volume Capacity Expansion Study prepared by the firm of Stone and Webster was filed. In Volume III, Technical Addendum, page 59, it is stated,

> The fixed expenses consist of depreciation, insurance, interest on debt, ad valorem taxes, income taxes, and an adequate return on equity; the variable expenses that can be included in this program are fuel, purchased or sold power, and other operation and maintenance expenses.

a. Has this function of TALARR been retained in Lyon No. 1?

b. Identify what expenses could be included in variable other operation and maintenance expenses.

c. What types of variable expenses were included in the TALARR scenarios?

3. Appendix XI of Lyon No. 1 lists the 17 participants of Delphi panels, who helped to develop probabilities used in the TALARR scenarios.

a. Explain how the Delphi participants were chosen.

b. Identify the qualifications sought for in each panelist.

c. Identify any participant who is affiliated or associated with a firm providing goods or services to LG&E.

---

1 An Investigation and Review of Louisville Gas and Electric Company's Capacity Expansion Study and the Need for Trimble County Unit No. 1, filed February 5, 1985.

Questions 4 through 11 relate to TALARR inputs, assumptions, and outputs. The questions were developed from a review of this scenario:

CAP 87 Case E-014-INT-BFUEL-BCON
TAL 298 EG 014B-BASE FUEL COSTS - W/O L.M. - TC 1991
(Base construction costs)

The review included the related workpapers identified as "CAP 87 - WP." Provide responses to these questions for the referenced scenario and related workpapers only.

4. From the "Description of Input Data" pages, Fixed Costs section:

a. Identify the types of expenses classified as "TC-1991 FOM" and "Fixed O&M."

b. Identify the sources of this cost data, in other words, did the information come from EGEAS, LG&E's accounting department, etc."

c. Briefly describe how these fixed costs were calculated.

5. From "CAP 87-WP-Capital Cost Calculations," the workpapers which support the "TC#1-BASE, 1991" section:

a. What is meant by "In current dollars" on the printout titled Trimble County Unit 1 Startup (1991-Base)?

b. Briefly describe how the amounts for 1987 through 1991 were arrived at, as shown on the previously referenced printout.

c. What is meant by "Current Year Dollars" and "EGEAS Dollars" on the printout titled Trimble County 1 - 1991, Base Case?

6. From the "Description of Input Data" pages, Annual Fixed Charge Rates Used - Sets #2 and #3 (Lyon No. 1, Appendix III):

a. In computing the cost of capital at 11.41 percent, explain why the target ratios and rates were considered appropriate to use.

b. For each ratio and rate in the capital structure, explain how that value was determined.

c. Explain how the book lives of 20 and 31 years were determined.

d. In the workpapers, "CAP 87-WP-Levelized Fixed Charges," it is stated the property tax rates were based on information provided by B. Rines and B. Mattingly. Provide the calculations used to generate the property tax rates, or explain how the rates were determined.

e. Explain how the insurance rate was determined.

7. From the "CAP 87-WP-CWIP," the workpapers which support the "TC-1991B CWIP" section:

a. On the printout titled Trimble County Unit 1 Startup (1991-Base), the sum of the Totals column from 1987 through 1991, is 471.4. On the printout titled TC-1991B, Total Annual Revenue Requirements, the sum of the revenue requirements for 1987 to 1991, is 296.54. Explain why these two amounts are different.

b. Explain how the revenue requirement amounts were calculated for CWIP.

8. From "CAP 87-WP-Combustion Turbines," specifically the following printouts titled:

Cane Run - Combustion Turbine, 1st Unit, 1997
Generic Unit - Combustion Turbine, 2001
Generic Unit - Combustion Turbine, 2004
Generic Unit - Combustion Turbine, 2006

which supports the "CT Cane Run and Generic, 1997-2006" sections:

a. For each of the referenced printouts, explain what is meant by "Current Year Dollars" and "EGEAS Dollars."

b. For each of the referenced printouts, explain how the Current Year Dollar amounts were determined.

9. From the "Description of Input Data" pages, Variable Costs section:

a. Explain how the amounts used as gas, oil, and coal variable costs in the TAL 298 scenario were determined. While the supporting workpapers do include the calculation of cost factors, the calculation of the cost amounts is not readily determinable.

b. Explain how the amounts for OVEC and DIVT were determined. Also explain what these costs represent in the scenario.

c. Explain how the amounts for UNMET were determined.

10. From reviewing the "Computation of Annual Revenue Requirements" pages, it appears that the TAL 298 scenario is driven by new values for the fixed and variable cost line items given each year. Is this a valid observation?

11. From the page titled, "Summary,"

a. What is meant by the term, "Levelized Annual Revenue Requirements?"

b. How are levelized annual revenue requirements computed?

c. Of what use or benefit are these computations?

12. From "CAP 87-WP-Power Sales," printout titled Study Period Sales Report, and the accompanying page with columns headed as "Study" and "w Extensions":

a. Explain how the various columns of figures on the Study Period Sales Report are used to arrive at the values shown in the Present Worth column.

b. Explain what the Present Worth and Cumulative Present Worth values represent.

c. Explain why the values shown in the "Study" column represent the off-system sales that were deducted from the present worth of revenue requirements ("PWRR") of the Trimble County decision tree analysis, reported on page 10-2 of Lyon No. 1.

d. In Lyon No. 1, decision tree analysis PWRRs for Trimble County options, 1992-1995 (page 10-3 and 10-4) and for a Joint Ownership Sale at 25 percent (page 10-7) have been modified for off-system sales. The amount of adjustment does not appear to be in the "CAP 87-WP-Power Sales" workpapers. Explain how the off-system sales adjustment for the referenced PWRRs were determined.

13. According to page 29 of Ryan Exhibit 1 and page 6-26 of Lyon Exhibit 1, there appears to be some inconsistency in the projections of gas prices used in each study. Provide an explanation of why different forecasts were used in each study.

14. According to page 29 of Ryan Exhibit 1 and pages 6-25 and 6-26 in Lyon Exhibit 1, there appears to be some inconsistency in the projections of electric prices used in each study. Provide an explanation of why different forecasts were used in each study.

15. At page 6 of Lyon Prefiled Testimony it states that LG&E could reduce its revenue requirements from the retail customers by selling power or an equity position of Trimble County to another

party. Mr. Lyon further testifies that it is reasonable to assume either type of sale is possible and supports this contention with a study performed by Dr. Corio and Ms. Lazo. Does LG&E have any other evidence to support this contention?

Done at Frankfort, Kentucky, this 2nd day of November, 1987.

PUBLIC SERVICE COMMISSION

Richard D. Heman Jr.

For the Commission

ATTEST:

Executive Director